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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,988	11/08/2001	Sture Helmersson	19378.0012	6778

7590 08/04/2003

Swidler Berlin Shereff Friedman  
3000 K Street  
Suite 300  
Washington, DC 20007

EXAMINER

PALABRICA, RICARDO J

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/868,988

Applicant(s)

HELMERSSON ET AL.

Examiner

Rick Palabrica

Art Unit

3641

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 July 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: \_\_\_\_\_

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

Continuation of 5. does NOT place the application in condition for allowance because: applicant's arguments are not convincing for the reasons stated in the 5/13/03 Office Action and the clarification provided herein. Applicant alleges that Ueda et al. do not disclose a control rod having: a) a lesser mean quantity of absorber per unit length of the control rod in an upper part than in a lower part; and b) a plurality of recesses through the absorber blades arranged in the inner part of the absorber blades along the cruciform center. The examiner disagrees.

As to item a), Ueda et al. show in Fig. 1 an embodiment where there is an "upper end" (I4, I5 and I6). They disclose that there is no neutron absorber in I4 (see col. 8, lines 55+). Also the pitch between absorber housing holes in said upper end is larger than those in W (see Fig. 12A), or the diameter of the absorber housing holes in the upper part is smaller than the effective diameter of holes in W (see Fig. 12D). This absorber characteristic at the upper end is further clearly depicted in Fig. 7 that shows a stepwise decreasing reactivity worth of the control blade at its upper end. Note that claim 2 recites that the "upper part constitutes at most one-third of the length of the absorber blade". The examiner defines "upper end" as that part of the blade corresponding to the stepwise decreasing reactivity worth shown on the right hand side of Fig. 7. Note that this "upper part" is less than one-third of the length of the blade (which meets the limitation "at most one-third"), and the mean quantity of absorber in this "upper end" is less than the rest of the blade (which the examiner defines as the "lower part"). If one computes the area under this stepwise region and divides this area by the associated length to obtain the mean absorber quantity per unit length, the resulting value will clearly be less compared to the same computation for the remaining part of the blade.

As to item b), Ueda et al. shows in Fig. 36A an embodiment with a plurality of recesses in the inner part. This "plurality of recesses" reads on two recesses; namely, the recess 633 and the recess at Xd, as stated in the previous Office Action.